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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,041	07/13/2001	Marc Madou	22727/04096	2217

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CALFEE HALTER & GRISWOLD, LLP
800 SUPERIOR AVENUE
SUITE 1400
CLEVELAND, OH 44114

EXAMINER

CHUNDURU, SURYAPRABHA

ART UNIT	PAPER NUMBER
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1637

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/905,041	Applicant(s) MADOU ET AL.	
	Examiner Suryaprabha Chunduru	Art Unit 1637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41 and 58-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 41 and 58-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: <u>5/26/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicants' response to the earlier office action filed on July 13, 2004 has been entered.
2. Claim 41 is amended. Claims 42-57 are canceled. New claims 58-63 are added. Thus claims 41, and 58-63 are pending and considered for examination.

Response to Arguments

3. Applicants' response to the office action is fully considered and found persuasive.
4. With reference to the rejection under 35 USC 102(b), Applicants amendment and arguments are fully considered and the rejection is withdrawn herein in view of the amendment.
5. With reference to the rejection under 35 USC 103(a), Applicants amendment and arguments are fully considered and the rejection is withdrawn herein in view of the amendment and new grounds of rejections.

New Grounds of Rejections

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 41, 58-63 are rejected under 35 U.S.C. 102(b) as being anticipated by Neri et al. (WO 97/40142).

Neri et al. teach a synthetic (see page 8, line 10-12) multimeric biopolymer (calmodulin binding peptide ligand) of claim 41, comprising plurality of monomeric units (peptide units) (see

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page 13, line 16- 25), wherein a plurality of said multimeric units in said biopolymer comprise a binding region for an analyte (page 13, line 16-25);

Wherein the monomeric units that comprise a binding region for analyte are covalently linked to each other (peptide bonds, reversible) (see page 13, line 16-25);

Wherein the monomeric units comprise a binding region for an analyte generates a signal (column page 12, line 23-37, page 13, line 1-7);

Wherein the signal generated by the monomeric units linked covalently with each other bound to an analyte is greater than the signal generated by the monomeric units that are linked noncovalently linked to each other and bound to an analyte (see page 13, line 35-37, page 14, line 1-16, wherein Fig. 1-3 show the sensograms and dissociation constants of peptides and their binding affinity towards calmodulin).

With regard to claim 58-59, Neri et al. disclose that the multimeric biopolymer comprises at least one calmodulin monomer or a dimer or multimer (see page 13, line 16-20);

With regard to claim 60, Neri et al. also disclose that the biopolymer changes its three-dimensional conformation in response to binding of a proton (Ca^{2+}) from the binding region (see page 6, line 36-38, page 7, line 1-9, page 10, line 29-38);

With regard to claim 61-62, Neri et al. disclose that the biopolymer comprises an enzyme that catalyzes a biochemical reaction, which results in formation of protons (active sites) upon binding and changes three-dimensional conformation (see page 9, line 8-22, line 27-37, page 10, line 35-38, page 6, line 36-38, page 7, line 1-9).

With regard to claim 63, Neri et al. disclose that the biopolymer, comprises 2 (dimer) or more monomeric units (see page 13, line 16-20).

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Thus the disclosure of Neri et al. meets the limitations in the instant claims.


Conclusion


No claims are allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suryaprabha Chunduru whose telephone number is 571-272-0783. The examiner can normally be reached on 8.30A.M. - 4.30P.M, Mon - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 571-272-0782. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and - for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.


Suryaprabha Chunduru
September 20, 2004


JEFFREY FREDMAN
PRIMARY EXAMINER

7/29/04